



SAND CREEK MASSACRE

Prairie Dogs

Importance

Prairie dogs increase habitat diversity and contribute to grassland ecosystem processes. The black-tailed prairie dog (*Cynomys ludovicianus*), listed as a species of special concern by Colorado, occurs in Sand Creek Massacre National Historic Site (NHS) and is the most abundant and widely distributed prairie dog species. Although prairie dogs are disproportionately important to other species relative to their abundance, their consideration as a keystone species is controversial. Species that prey on prairie dogs and use their burrows for shelter include American badgers (*Taxidea taxus*), coyotes (*Canis latrans*), ferruginous hawks (*Buteo regalis*), golden eagles (*Aquila chrysaetos*), prairie rattlesnakes (*Crotalus viridis*), and burrowing owls (*Athene cunicularia*), a state species of special concern. Though undocumented in Sand Creek Massacre NHS, the black-footed ferret (*Mustela nigripes*), a federally and state listed endangered species, is dependent on prairie dogs and uses their burrows for survival. Prairie dogs clip vegetation, creating open habitats preferred by grassland birds such as the horned lark (*Eremophila alpestris*) and mountain plover (*Charadrius montanus*), a state species of special concern. Prairie dog management is integral to sustaining the long-term viability of a self-sustaining Sand Creek complex, preserving the existing native plant community and allied species, and maintaining relationships with surrounding landowners.

Status and Trends in Sand Creek

Prairie dogs historically occupied 3-7 million acres of Colorado. In 2005, they occupied approximately 630,000 acres of the



Burrowing owls (*Athene cunicularia*) and other species use prairie dog burrows for shelter.

RESOURCE BRIEF



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Black-tailed prairie dog (*Cynomys ludovicianus*).

state. The population decline in eastern Colorado is attributed to plague and changes in land use. Prairie dogs have been present northwest of Sand Creek Massacre NHS since the 1980s and comparison of aerial photos indicates the prairie dog complex is expanding. In 2007, 228 acres of Sand Creek Massacre NHS were occupied by two colonies with an estimated average density of 94 prairie dogs per acre. These are the largest active colonies along the Front Range in south-central and southeastern Colorado. Numerous dens of predators were also documented in the area. Burrowing owls were observed on the southern colony and mountain plover were observed near the north prairie dog colony on private land.

Discussion

The Sand Creek prairie dog complex is likely to expand rapidly if left undisturbed. The high density colonies are young and are each surrounded by shortgrass prairie suitable for expansion. National Park Service policy is to conserve and recover black-tailed prairie dogs wherever possible. When populations are spatially restricted, prairie dogs will populate the remaining suitable habitat in high density, creating the potential for bare and disturbed soils which may be colonized by invasive species. Long-term management commitment is required to prevent the expansion onto adjoining private land. Plague, which can cause severe declines in populations, although not reported in the immediate area, has been documented in nearby communities. Populations rebound quickly after crashes.